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Oct. 8th. Outline of envelope ragged, the tail reaching a little beyond *α Coronæ Borealis*. On the lower side the light shades off almost imperceptibly; on the upper, though ragged, it terminates comparatively abruptly. The darkness down the envelope scarcely so clear as before. Nucleus about as bright as *Mars* or *α Lyræ*. The shape of the envelope bears a resemblance to a pen, being narrow at the head, and after a short space suddenly spreading on the lower side like the feather of a quill.

Oct. 12th. Moonlight. Nucleus nearly but not quite as bright as on the 8th. The tail much longer but fainter; the axial darkness down the envelope not visible.

Oct. 16. Nucleus large and diffused; the convex or (now) southern side of envelope brighter than the other, the light in it appearing to diminish more abruptly, and so to form a greater contrast with the ground of the sky.

Oct. 26th. Envelope evident, but very faint; nucleus large, ragged, and indistinct.

Oct. 27th. Comet very faint; nucleus large and hazy; tail roughly estimated at four or five degrees in length.

In examining the appearance of the comet, use was made of a 3½-foot refractor, with an aperture of 2¾ inches.

Madras, Nov. 13, 1858.

Observations of Comet V., 1858. By R. L. J. Ellery, Esq.

(*Letter to the Astronomer Royal.*)

A large comet made its appearance in these latitudes about the 10th of this month, and continues to increase in brilliancy—its nucleus is about equal to a star of the 1½ magnitude—its tail now extends over about 6°; at its first appearance it was not visible for more than 3°. I inclose herewith a few observations made with an 18-inch altazimuth on the 145th meridian. The observations are merely corrected for index errors and microscopes, each observation is made up of sets with the instrument in reversed positions. We are getting a series of photometric measurements and drawings, which I hope to be able to forward by next mail.

Date.	Object.	Observed Azimuths.	Observed Altitudes.	Barometer.	Temp. Air.	Local Sidereal Time.
		° ′ ″	° ′ ″	Inches.	Fahr.	° ′ ″
Oct. 12	Comet	79 59 37·35	16 5 50·99	29·964	53·0	20 14 30·00
		81 53 49·57	14 2 24·72			20 25 3·00
		84 55 50·30	9 42 20·32			20 47 37·75
		86 31 0·82	8 11 32·60			20 55 30·25
	Antares	97 40 40·20	35 24 7·11			20 37 25·00
		101 35 9·83	29 35 12·66			21 7 17·05

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Date.	Object.	Observed Azimuths.	Observed Altitudes.	Barometer cor. to 32.	Temp. Air.	Local Sidereal Time.
		° ′ ″	° ′ ″	Inches.	Fahr.	° ′ ″
Oct. 13	Comet	85 15 53·50	15 12 59·39	29·920	59·8	20 41 30·00
		86 52 17·67	13 19 56·44			20 51 42·50
		89 41 59·97	9 48 37·28			21 9 25·35
	Antares	100 42 17·60	30 52 25·63			21 0 37·50
		103 33 46·42	26 39 5·19			21 22 31·00
14	Comet	86 10 58·40	19 39 36·70	29·952	57·6	20 39 59·90
	Antares	89 30 4·52	32 39 57·00			21 51 25·40
	Comet	92 3 43·60	12 19 54·05			21 17 57·00
	Antares	108 2 21·40	20 37 52·66			21 56 53·60

Observatory longitude 145° E., latitude 37° 46′ 50″.

"*Astronomical Observatory, Williamstown,*
"*Victoria, Oct.* 16, 1858."

Sextant Observations of Donati's Comet taken on board Her Majesty's Ship Siren.

(*Communicated to the Admiralty by Capt. G. M. Balfour, Commander.*)

Date.	Lat. S.	Long. W.	Compass Bearings.	Ship's M.T. nearly.	Remarks.
1858.	° ′	° ′		P.M. h m s	
Oct. 7	15 7	33 44	N.W. by W.	7 35 0	Apparent Altitude 2°45′. Was first seen at an altitude about 10° 1′ at 7^{h} 15^{m} P.M. About the same size as a star of the 2d magnitude, with a tail which subtended an angle of about 5°.
8	16 28	34 31	W.N.W.	6.44 0	App. Dist. from Moon's N. L. 29° 45′.
	...	...	...	7 5 33	App. Dist. from Vega 57° 31′.
	...	...	...	7 5 33	App. Altitude 5° 4′ 35″. Distance from Vega 57° 44′.
9	...	...	...	...	Heavy rain. Stars obscured.
10	19 6	35 31	W. by N. ½ N.	7 to 8	Apparently about the same size as a star of 1st magnitude. Length of tail about 10°.
11	19 32	37 0	W. by N.	7 11 0	App. Alt. 13°.
	...	..	...	7 16 0	App. Dist. of Moon's N. L. 33° 10′.
	...	...	...	...	App. Dist. of Vega 58° 18′.
	...	...	...	7 21 0	App. Dist. of Altair 65° 32′.
	...	...	...	7 23 0	App. Alt. 10° 15′. Set W. ½ N. at about 8^{h} 9^{m} P.M.

Royal Observatory, Greenwich, 1858, *Dec.* 9.

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